

*KSP*  
Work Order ID 107397

\*107397\*

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September-23-13 11:49:58 AM

Item ID: D3208-9

Accept

\*N900040100\*

Setup

Start

\*NS1\*

Revision ID:

Stop

\*NS2\*

Item Name: Doubler

Start Date: 9/23/13 Start Qty: 5.00

\*5\* \*6\*

Cust Item ID:

Required Date: 9/23/13 Req'd Qty: 5.00

Customer:

Reference:

Approvals: Process Plan: MUS

Date: 13-09-24 Tooling: \_\_\_\_\_ Date: \_\_\_\_\_

Run

Start

\*NR1\*

QC: \_\_\_\_\_

Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Stop

\*NR2\*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr	Revision Nbr								
D3208	C								
100		0.00							
*100*	FLOW WATER JET								
Waterjet	Memo	0.00							
FLOW CNC Waterjet	1-Cut as per Dwg D3208								
2024.080	Dwg Rev: C								
	Prog Rev: C								
	2-Deburr if necessary								
110	QC2- Inspect parts off machine FAI/FAIB	0.00							
*110*	Memo	0.00							
QC									
Quality Control									

6 0 Ae  
13-12-06

6 0 Ae  
13-12-06

NCR: Yes / No

DQA: \_\_\_\_\_ Date: \_\_\_\_\_

**WORK ORDER NON-CONFORMANCE / UPDATE**

QA Closed: \_\_\_\_\_ Date: \_\_\_\_\_

Work Order: _____			DISPOSITION			AGAINST DEPARTMENT/PROCESS									
			Rework <input type="checkbox"/>	Skid-tube <input type="checkbox"/>	Crosstube <input type="checkbox"/>	Water Jet <input type="checkbox"/>	Engineering <input type="checkbox"/>								
			Scrap <input type="checkbox"/>	Machining <input type="checkbox"/>	Small Fab <input type="checkbox"/>	Prod. Eng. Coor. <input type="checkbox"/>	Quality <input type="checkbox"/>								
			Use-as-is <input type="checkbox"/>	Thermoforming <input type="checkbox"/>	Finishing <input type="checkbox"/>	Rec/Store/Packaging <input type="checkbox"/>	Other <input type="checkbox"/>								
			Work Order Update <input type="checkbox"/>	Large Fab <input type="checkbox"/>	Composite <input type="checkbox"/>	Supplier <input type="checkbox"/>									
Root Cause	Date	Step	Qty	Description of work order update or Non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector						
Doc/Data															
Equip/Tooling															
Operator															
Material															
Setup															
Other															
Process															
Supplier															
Training															
Unapproved															
FAULT CATEGORY															
<b>Landing Gear</b> <input type="checkbox"/> Bending <input type="checkbox"/> Centre Not Concentric to O/S <input type="checkbox"/> Cracks <input type="checkbox"/> Crushed/Crimped <input type="checkbox"/> Cuffs <input type="checkbox"/> Heat Treat <input type="checkbox"/> Inspection Strip in Tube <input type="checkbox"/> Ripples in Bend <input type="checkbox"/> Torque Waves in Extrusion <input type="checkbox"/> Turning Sequence <input type="checkbox"/> Wave/Twist in Tube				<b>General</b> <input type="checkbox"/> Bend <input type="checkbox"/> BOM/Route <input type="checkbox"/> Broken/Damaged <input type="checkbox"/> Burrs <input type="checkbox"/> Contamination <input type="checkbox"/> Countersink <input type="checkbox"/> Cut Too Short <input type="checkbox"/> Drill Holes <input type="checkbox"/> Drawing <input type="checkbox"/> Finish <input type="checkbox"/> Folio				<input type="checkbox"/> Grain <input type="checkbox"/> Hardware <input type="checkbox"/> Inspection Incomplete <input type="checkbox"/> Instructions Incomplete/Unclear <input type="checkbox"/> Maintenance <input type="checkbox"/> Mislabeled <input type="checkbox"/> Misread <input type="checkbox"/> Offset <input type="checkbox"/> Out of Calibration <input type="checkbox"/> Out of Sequence <input type="checkbox"/> Outside Dimensions		<input type="checkbox"/> Ovalized <input type="checkbox"/> Over/Under tolerance <input type="checkbox"/> Part Incorrect <input type="checkbox"/> Part Lost/Missing <input type="checkbox"/> Part Moved <input type="checkbox"/> Positioned Wrong <input type="checkbox"/> Power Loss/Surge		<input type="checkbox"/> Pressure/Forced <input type="checkbox"/> Temperature/Cure <input type="checkbox"/> Weld <input type="checkbox"/> Wrong Stock Pulled			
														<input type="checkbox"/> Other	

**Work Order ID 107397**

September-23-13 11:49:58 AM

**\*107397\***

Page 2

**Item ID:** D3208-9

Accept

**\*N900040100\***

Setup

Start

**\*NS1\***

**Revision ID:**

Stop

**\*NS2\***

**Item Name:** Doubler

**Start Date:** 9/23/13    **Start Qty:** 5.00

**\*5\***

**Cust Item ID:**

**Required Date:** 9/23/13    **Req'd Qty:** 5.00

**\*5\***

**Customer:**

**Reference:**

<b>Approvals:</b>	<b>Process Plan:</b> _____	<b>Date:</b> _____	<b>Tooling:</b> _____	<b>Date:</b> _____	<b>Run</b>	<b>Start</b>	<b>*NR1*</b>
	<b>QC:</b> _____	<b>Date:</b> _____	<b>SPC (Y/N):</b> _____	<b>Date:</b> _____	<b>Stop</b>		<b>*NR2*</b>

<b>Sequence ID/ Work Center ID</b>	<b>Operation Description</b>	<b>Set Up/ Run Hours</b>	<b>Tool ID</b>	<b>Tool #</b>	<b>Plan Code</b>	<b>Accept Qty</b>	<b>Reject Qty</b>	<b>Reject Number</b>	<b>Insp. Stamp</b>
120 <b>*120*</b> QC	QC8- Inspect parts - second check	0.00	SHP				6		
	<b>Memo</b>	0.00	B112/6						

130 <b>*130*</b> HandFinish	Chemical Conversion Coat per QSI005 4.1	0.00							
-----------------------------------	---	------	--	--	--	--	--	--	--

Hand Finishing	<b>Memo</b>	0.00							
----------------	-------------	------	--	--	--	--	--	--	--

140 <b>*140*</b> QC	QC7-Inspect Chemical Conversion Coat	0.00	DAS 27 989						
Quality Control	<b>Memo</b>	0.00	B112/09						

6 26/3-128

6 60X 28 13-129  
DAS 9-89

NCR: Yes / No

DQA: \_\_\_\_\_ Date: \_\_\_\_\_

**WORK ORDER NON-CONFORMANCE / UPDATE**

QA Closed: \_\_\_\_\_ Date: \_\_\_\_\_

Work Order: _____			DISPOSITION			AGAINST DEPARTMENT/PROCESS																		
			Rework <input type="checkbox"/>	Scrap <input type="checkbox"/>	Use-as-is <input type="checkbox"/>	Skid-tube <input type="checkbox"/>	Machining <input type="checkbox"/>	Thermoforming <input type="checkbox"/>	Large Fab <input type="checkbox"/>	Crosstube <input type="checkbox"/>	Small Fab <input type="checkbox"/>	Finishing <input type="checkbox"/>	Composite <input type="checkbox"/>	Water Jet <input type="checkbox"/>	Prod. Eng. Coor. <input type="checkbox"/>	Rec/Store/Packaging <input type="checkbox"/>	Supplier <input type="checkbox"/>	Engineering <input type="checkbox"/>	Quality <input type="checkbox"/>	Other <input type="checkbox"/>				
Part No. _____			Work Order Update <input type="checkbox"/>																					
NCR No. _____																								
Root Cause		Date	Step	Qty	Description of work order update or Non-conformance		Initial Chief Eng	Action Description		Sign & Date	Verification		QC Inspector											
Doc/Data	<input type="checkbox"/>																							
Equip/Tooling	<input type="checkbox"/>																							
Operator	<input type="checkbox"/>																							
Material	<input type="checkbox"/>																							
Setup	<input type="checkbox"/>																							
Other	<input type="checkbox"/>																							
Process	<input type="checkbox"/>																							
Supplier	<input type="checkbox"/>																							
Training	<input type="checkbox"/>																							
Unapproved	<input type="checkbox"/>																							
FAULT CATEGORY																								
<b>Landing Gear</b> <input type="checkbox"/> Bending <input type="checkbox"/> Centre Not Concentric to O/S <input type="checkbox"/> Cracks <input type="checkbox"/> Crushed/Crimped <input type="checkbox"/> Cuffs <input type="checkbox"/> Heat Treat <input type="checkbox"/> Inspection Strip in Tube <input type="checkbox"/> Ripples in Bend <input type="checkbox"/> Torque Waves in Extrusion <input type="checkbox"/> Turning Sequence <input type="checkbox"/> Wave/Twist in Tube					<b>General</b> <input type="checkbox"/> Bend <input type="checkbox"/> BOM/Route <input type="checkbox"/> Broken/Damaged <input type="checkbox"/> Burrs <input type="checkbox"/> Contamination <input type="checkbox"/> Countersink <input type="checkbox"/> Cut Too Short <input type="checkbox"/> Drill Holes <input type="checkbox"/> Drawing <input type="checkbox"/> Finish <input type="checkbox"/> Folio					<input type="checkbox"/> Grain <input type="checkbox"/> Hardware <input type="checkbox"/> Inspection Incomplete <input type="checkbox"/> Instructions Incomplete/Unclear <input type="checkbox"/> Maintenance <input type="checkbox"/> Mislabeled <input type="checkbox"/> Misread <input type="checkbox"/> Offset <input type="checkbox"/> Out of Calibration <input type="checkbox"/> Out of Sequence <input type="checkbox"/> Outside Dimensions					<input type="checkbox"/> Ovalized <input type="checkbox"/> Over/Under tolerance <input type="checkbox"/> Part Incorrect <input type="checkbox"/> Part Lost/Missing <input type="checkbox"/> Part Moved <input type="checkbox"/> Positioned Wrong <input type="checkbox"/> Power Loss/Surge					<input type="checkbox"/> Pressure/Forced <input type="checkbox"/> Temperature/Cure <input type="checkbox"/> Weld <input type="checkbox"/> Wrong Stock Pulled				

**Work Order ID 107397****\*107397\***

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Item ID:	D3208-9	Accept	<b>*N900040100*</b>	Setup	Start	<b>*NS1*</b>	
Revision ID:					Stop	<b>*NS2*</b>	
Item Name:	Doubler						
Start Date:	9/23/13	Start Qty: 5.00	<b>*5*</b>	Cust Item ID:			
Required Date:	9/23/13	Req'd Qty: 5.00	<b>*5*</b>	Customer:			
Reference:							
Approvals:	Process Plan:	Date:	Tooling:	Date:	Run	Start	<b>*NR1*</b>
	QC:	Date:	SPC (Y/N):	Date:	Stop		<b>*NR2*</b>

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
150 <b>*150*</b> Packaging	Identify as per dwg & Stock Location: <u>ST202</u>	0.00					<u>6X</u>	<u>DAS 28 9-89</u>	<u>13-12-9</u>
	Memo	0.00							
160 <b>*160*</b> QC	QC21- Final Inspection - Work Order Release	0.00							<u>13/12/10 JJ</u>
	Memo	0.00							

13/12/10 JJ13/12/10 JJ

NCR: Yes / No

DQA: \_\_\_\_\_ Date: \_\_\_\_\_

**WORK ORDER NON-CONFORMANCE / UPDATE**

QA Closed: \_\_\_\_\_ Date: \_\_\_\_\_

Work Order: _____			DISPOSITION			AGAINST DEPARTMENT/PROCESS					
			Rework <input type="checkbox"/>	Skid-tube <input type="checkbox"/>	Crosstube <input type="checkbox"/>	Water Jet <input type="checkbox"/>	Engineering <input type="checkbox"/>				
			Scrap <input type="checkbox"/>	Machining <input type="checkbox"/>	Small Fab <input type="checkbox"/>	Prod. Eng. Coor. <input type="checkbox"/>	Quality <input type="checkbox"/>				
			Use-as-is <input type="checkbox"/>	Thermoforming <input type="checkbox"/>	Finishing <input type="checkbox"/>	Rec/Store/Packaging <input type="checkbox"/>	Other <input type="checkbox"/>				
			Work Order Update <input type="checkbox"/>	Large Fab <input type="checkbox"/>	Composite <input type="checkbox"/>	Supplier <input type="checkbox"/>					
Root Cause	Date	Step	Qty	Description of work order update or Non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector		
Doc/Data											
Equip/Tooling											
Operator											
Material											
Setup											
Other											
Process											
Supplier											
Training											
Unapproved											
FAULT CATEGORY											
<b>Landing Gear</b> <input type="checkbox"/> Bending <input type="checkbox"/> Centre Not Concentric to O/S <input type="checkbox"/> Cracks <input type="checkbox"/> Crushed/Crimped <input type="checkbox"/> Cuffs <input type="checkbox"/> Heat Treat <input type="checkbox"/> Inspection Strip in Tube <input type="checkbox"/> Ripples in Bend <input type="checkbox"/> Torque Waves in Extrusion <input type="checkbox"/> Turning Sequence <input type="checkbox"/> Wave/Twist in Tube				<b>General</b> <input type="checkbox"/> Bend <input type="checkbox"/> BOM/Route <input type="checkbox"/> Broken/Damaged <input type="checkbox"/> Burrs <input type="checkbox"/> Contamination <input type="checkbox"/> Countersink <input type="checkbox"/> Cut Too Short <input type="checkbox"/> Drill Holes <input type="checkbox"/> Drawing <input type="checkbox"/> Finish <input type="checkbox"/> Folio <input type="checkbox"/> Grain <input type="checkbox"/> Hardware <input type="checkbox"/> Inspection Incomplete <input type="checkbox"/> Instructions Incomplete/Unclear <input type="checkbox"/> Maintenance <input type="checkbox"/> Mislabeled <input type="checkbox"/> Misread <input type="checkbox"/> Offset <input type="checkbox"/> Out of Calibration <input type="checkbox"/> Out of Sequence <input type="checkbox"/> Outside Dimensions							
				<input type="checkbox"/> Ovalized <input type="checkbox"/> Over/Under tolerance <input type="checkbox"/> Part Incorrect <input type="checkbox"/> Part Lost/Missing <input type="checkbox"/> Part Moved <input type="checkbox"/> Positioned Wrong <input type="checkbox"/> Power Loss/Surge <input type="checkbox"/> Other							

# Picklist Print

September-23-13 11:49:58 AM

Page 1

<b>Work Order ID:</b>	107397	<b>Start Date:</b>	9/23/13	<b>Required Date:</b>	9/23/13
<b>Parent Item:</b>	D3208-9	<b>Start Qty:</b>	5.00	<b>Required Qty:</b>	5.00
<b>Parent Item Name:</b>	Doubler				

**Comments:** IPP A04.06.09New issueKJ/RF  
 IPP Rev:B Now on Waterjet 07-08-29 JLM Verified By:EC IPP REV C:PER REV B 12-03-  
 23 JLM VERIFIED BY:EC IPP REV:D 12.04.20 as per dwg rev.C DD verf:EC

<b>Component Item ID/ Item Name</b>	<b>Replacement Item ID</b>	<b>Mfg/ Purch</b>	<b>Bin Item</b>	<b>Primary Location</b>	<b>Last Location</b>	<b>Route Seq ID</b>	<b>Unit of Measure</b>	<b>Qty on Hand</b>	<b>Qty per Kit</b>	<b>Total Qty</b>	<b>Qty Issued</b>	<b>Date Issued</b>	<b>Status</b>
M2024T3S.080 2024-T3 .080 sheet		Purchased	No			100	sf	112.1700	0.1444	-0.76		Ac 13.12.06	

<b>Location</b>	<b>Loc Qty</b>	<b>Loc Code</b>
MAT022	112.17	
123217	27.75	
125636	25.92	
M126161	58.5	

m107668 → .76

NCR: Yes / No

DQA: \_\_\_\_\_ Date: \_\_\_\_\_

## **WORK ORDER NON-CONFORMANCE / UPDATE**

**QA Closed:** \_\_\_\_\_ **Date:** \_\_\_\_\_

Work Order: _____				DISPOSITION		AGAINST DEPARTMENT/PROCESS					
				Rework <input type="checkbox"/> Scrap <input type="checkbox"/> Use-as-is <input type="checkbox"/> Work Order Update <input type="checkbox"/>	Skid-tube <input type="checkbox"/> Machining <input type="checkbox"/> Thermoforming <input type="checkbox"/> Large Fab <input type="checkbox"/>	Crosstube <input type="checkbox"/> Small Fab <input type="checkbox"/> Finishing <input type="checkbox"/> Composite <input type="checkbox"/>	Water Jet <input type="checkbox"/> Prod. Eng. Coor. <input type="checkbox"/> Rec/Store/Packaging <input type="checkbox"/> Supplier <input type="checkbox"/>	Engineering <input type="checkbox"/> Quality <input type="checkbox"/> Other <input type="checkbox"/>			
Part No. _____											
NCR No. _____											
Root Cause	Date	Step	Qty	Description of work order update or Non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector		
Doc/Data											
Equip/Tooling											
Operator											
Material											
Setup											
Other											
Process											
Supplier											
Training											
Unapproved											
FAULT CATEGORY											
Landing Gear				General							
Bending				Bend <input type="checkbox"/>	Grain <input type="checkbox"/>			Ovalized <input type="checkbox"/>	Pressure/Forced <input type="checkbox"/>		
Centre Not Concentric to O/S				BOM/Route <input type="checkbox"/>	Hardware <input type="checkbox"/>			Over/Under tolerance <input type="checkbox"/>	Temperature/Cure <input type="checkbox"/>		
Cracks				Broken/Damaged <input type="checkbox"/>	Inspection Incomplete <input type="checkbox"/>			Part Incorrect <input type="checkbox"/>	Weld <input type="checkbox"/>		
Crushed/Crimped				Burrs <input type="checkbox"/>	Instructions Incomplete/Unclear <input type="checkbox"/>			Part Lost/Missing <input type="checkbox"/>	Wrong Stock Pulled <input type="checkbox"/>		
Cuffs				Contamination <input type="checkbox"/>	Maintenance <input type="checkbox"/>			Part Moved <input type="checkbox"/>			
Heat Treat				Countersink <input type="checkbox"/>	Mislabeled <input type="checkbox"/>			Positioned Wrong <input type="checkbox"/>			
Inspection Strip in Tube				Cut Too Short <input type="checkbox"/>	Misread <input type="checkbox"/>			Power Loss/Surge <input type="checkbox"/>			
Ripples in Bend				Drill Holes <input type="checkbox"/>	Offset <input type="checkbox"/>			Other <input type="checkbox"/>			
Torque Waves in Extrusion				Drawing <input type="checkbox"/>	Out of Calibration <input type="checkbox"/>						
Turning Sequence				Finish <input type="checkbox"/>	Out of Sequence <input type="checkbox"/>						
Wave/Twist in Tube				Folio <input type="checkbox"/>	Outside Dimensions <input type="checkbox"/>						

DART AEROSPACE LTD	Work Order:	107397
Description: Doubler	Part Number:	D3208-9
Inspection Dwg: D3208	Rev: AF C JH 12-02-00	Page 1 of 1

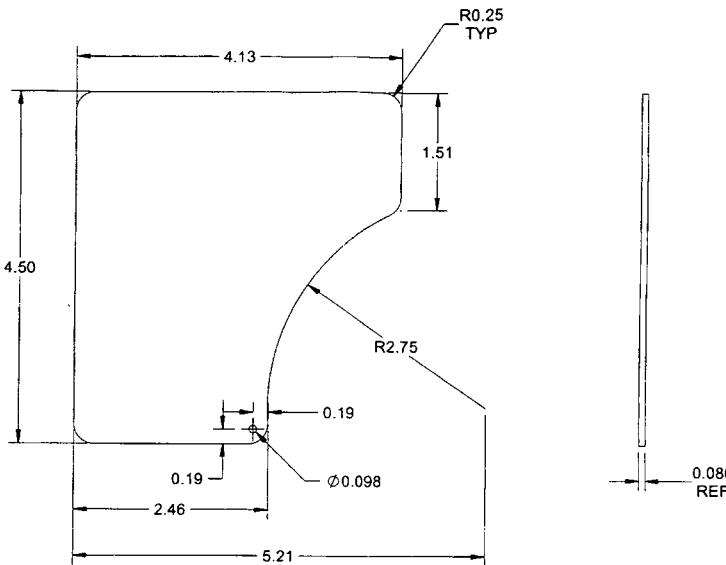
## FIRST ARTICLE INSPECTION CHECKLIST

## X First Article      Prototype

DAS

Measured by:	<u>Ae</u>	Audited by:	<u>27</u> <u>9-89</u>	Prototype Approval:	N/A
Date:	<u>13.12.06</u>	Date:	<u>B126</u>	Date:	N/A

Rev	Date	Change	Revised by	Approved
A	05.02.17	New Issue	KJ/JLM	JW



D3208-9 DOUBLER

NOTES:

- 1) MATERIAL: 2024-T3 ALUMINUM SHEET, 0.080 THICK  
PER QQ-A-250/4 OR AMS-QQ-A-250/4  
OR AMS 4037 OR ASTM B209  
REF DART SPEC M2024T3S.080
- 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: IDENTIFY PER QSI 044 6.1
- 7) WEIGHT: 0.12 lbs

DESIGN	RF	<b>DART AEROSPACE LTD</b>
DRAWN	RF	HAWKESBURY, ONTARIO, CANADA
CHECKED	<i>[Signature]</i>	DRAWING NO.
MFG. APPR.	<i>[Signature]</i>	REV. C
APPROVED	<i>[Signature]</i>	D3208
DE APPR.	<i>[Signature]</i>	SHEET 8 OF 9
DATE	12.04.12	TITLE <b>DOUBLER</b>
		SCALE NTS
		COPYRIGHT © 2004 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD

107397 MCS  
13-09-2014  
RELEASED  
2012-04-18  
MM